U.S. ARMY Tank Automotive Research, Development and Engineering Center (TARDEC)

Dr. Grace M. Bochenek, Director

Bundesamt für Wehrtechnik und Beschaffung

27 July 11

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Mission and Vision

- Provides full life-cycle engineering support and is provider-of-first-choice for all DOD ground combat and combat support vehicle systems.
- Develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for the Future Force.

Responsible for Research, Development and Engineering Support to *3,300* Army systems and many of the Army's and DOD's Top Joint Warfighter Development Programs

Ground Systems Enterprise

Research, Development and Engineering Command (RDECOM)

Army Research Laboratory (ARL)

Aviation and Missile Research, Development and Engineering Center (AMRDEC)

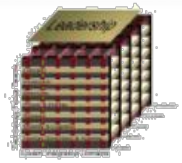
Simulation and Training Technology Center (STTC)

Communications-Electronic Research, Development and Engineering Center (CERDEC)

Armament Research, Development and Engineering Center (ARDEC)

Edgewood Chemical and Biological Center (ECBC)

Natick Soldier Research, Development and Engineering Center (NSRDEC)



Department of the Army (DA)

Army Materiel Command (AMC)

(ASA(ALT))

ACQ Center

PEO GCS

PEO CS&CSS

PEO Integration

TACOM LCMC

ILSC

Industrial Base

PEO Soldier

JPEO CBD*

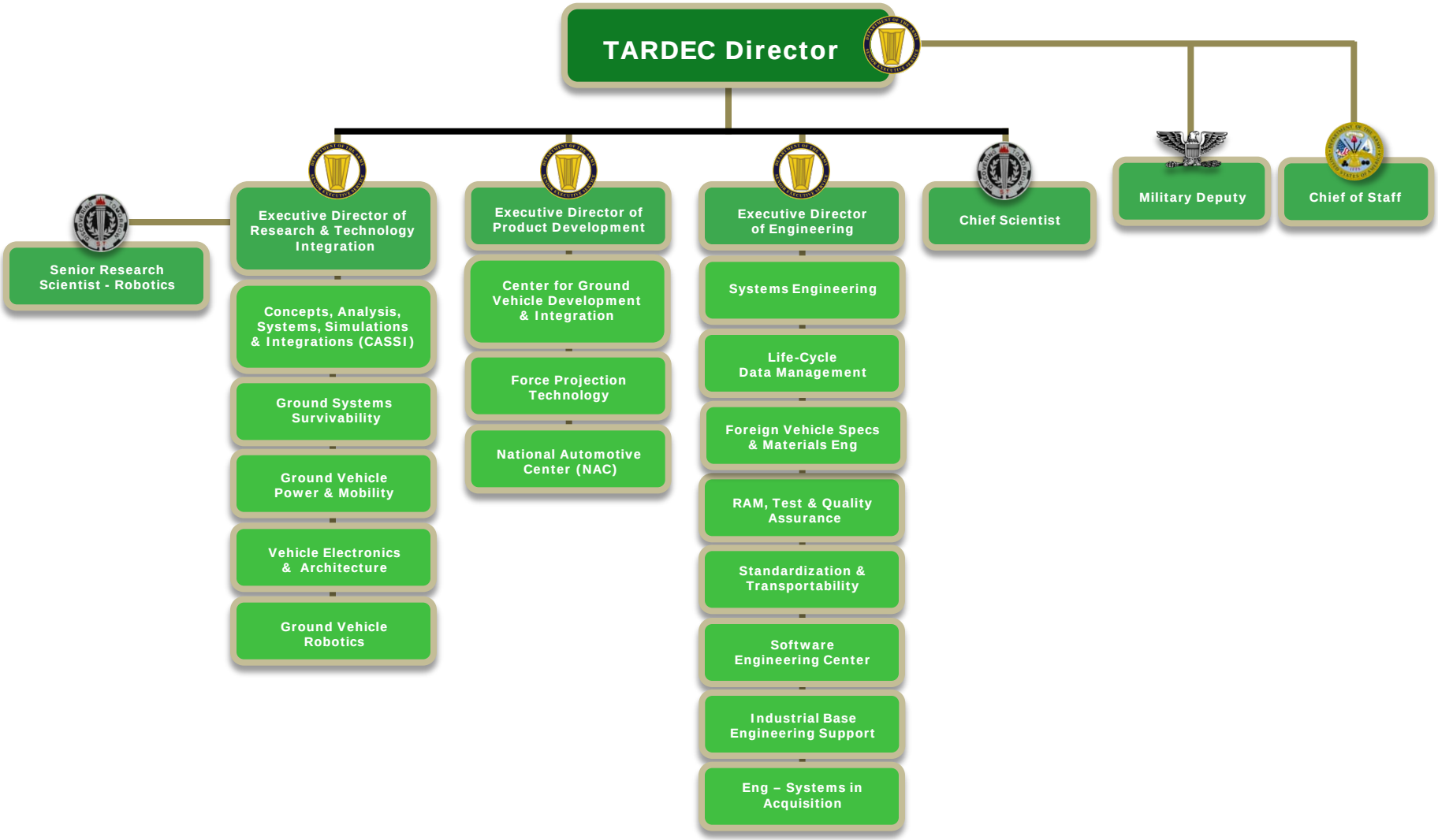
Joint Center for Ground Vehicles

Office of Naval Research

MARCORSYSCOM

PEO Land Systems

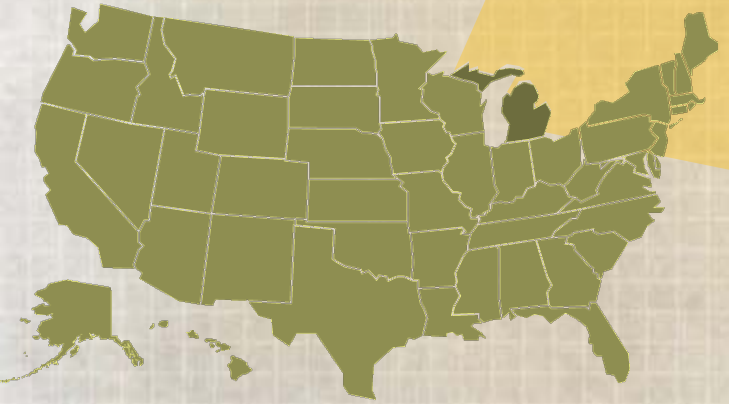
Organizational Structure

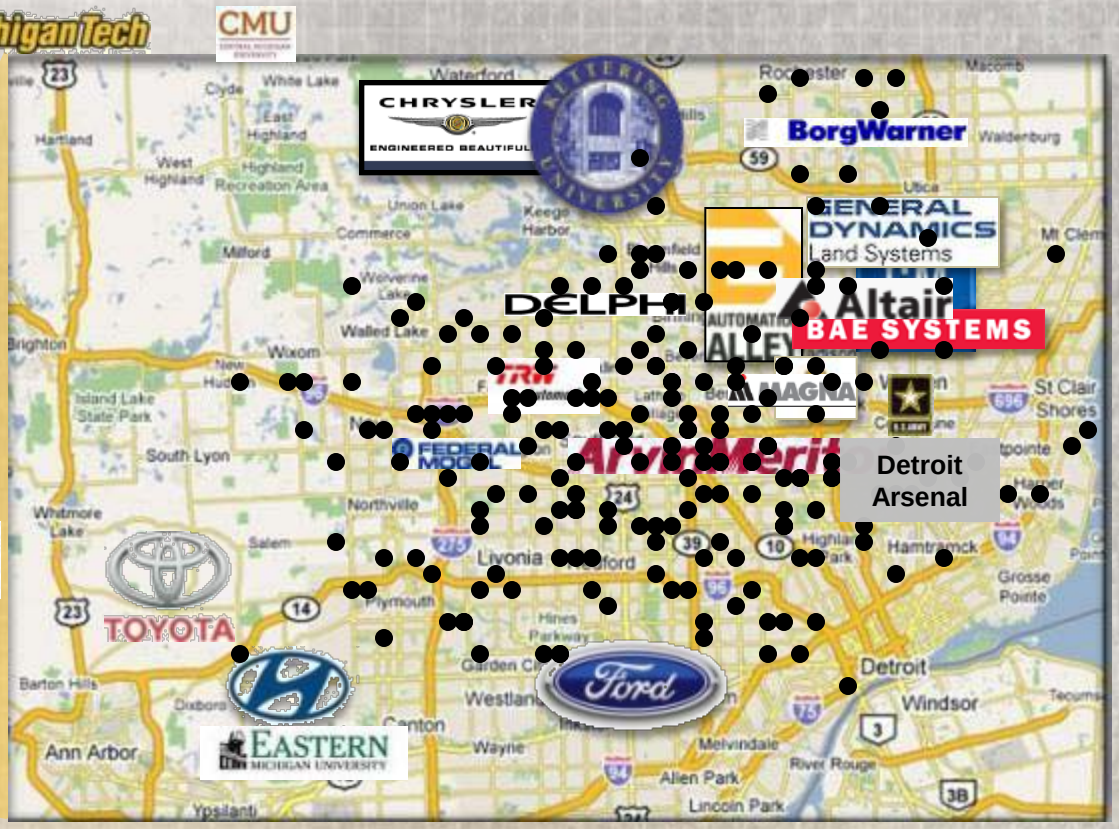


Exploiting Strategic Relationships is Key to Innovation

Geographic Benefits

- Connected to World-Class Automotive Engineering Universities at our doorstep
- Defense Industry Ground Systems Hub
- Direct Linkage to World-Class Automotive Research and Development Centers
- Strategic Engagement with 1st, 2nd and 3rd Tier Automotive Supplier Network

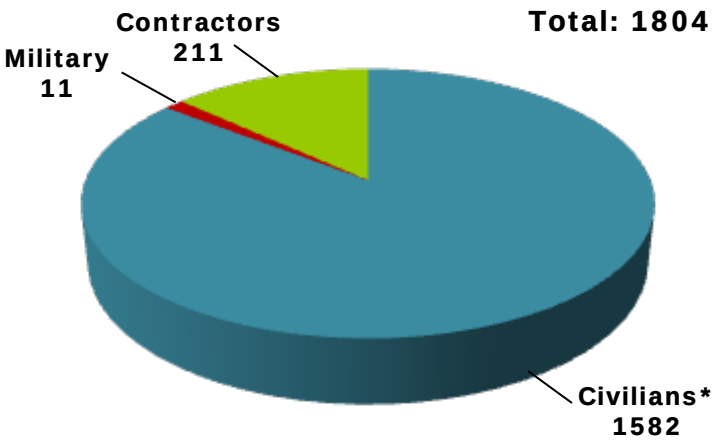




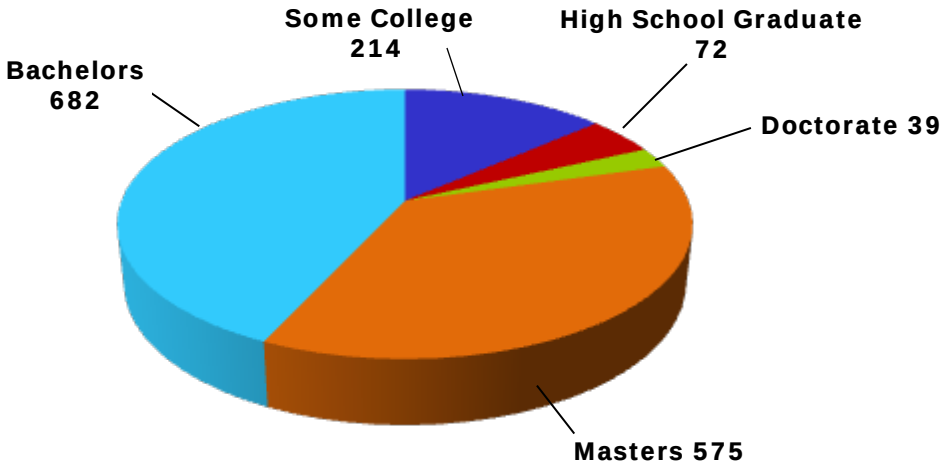
Most Robust Automotive Engineering Expertise & Academic Institutions in the World

TARDEC Personnel

Total Workforce



Education



*Includes permanent/term employees, local interns, STEPs, and local SCEPs (in a pay status).

As of 25JAN11

Robust Technology Development & Integration

Systems Engineering & Integration Excellence Across the Life Cycle

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Laboratory Capabilities

System & Simulation Integration Laboratories


Concept Development


Modeling & Simulation Environment


System Evaluation


MRAP Systems Integration Lab

Survivability Laboratories



Ballistic Testing

Physical Simulation Laboratories


Reconfigurable N-Post Simulator


Multi-Axial Simulator


Vehicle Inertial Properties Evaluation Rig

Prototype Integration


Center for Ground Vehicle Development & Integration


Large Robotics Integration Cell

Fuels & Lubricants Laboratories


Coolant Lab


Grease & Hydraulic Fluid Lab


Fuel & Lube Lab


Analytical Lab

Power & Energy Laboratories

Ground Systems Power & Energy Lab

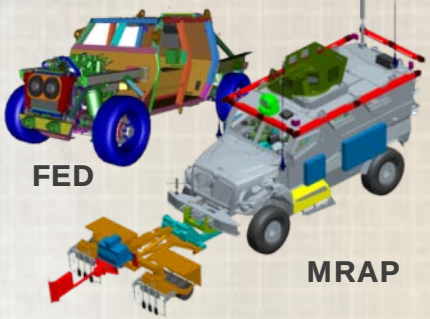

Propulsion Labs

TARDEC's Warren, MI operations have a resource value of over $1.1B and occupy 12 facilities on the Detroit Garrison totaling over 936,000 square feet of laboratory space

Systems Technology Integration & System-of-Systems Engineering

Advanced Concepting

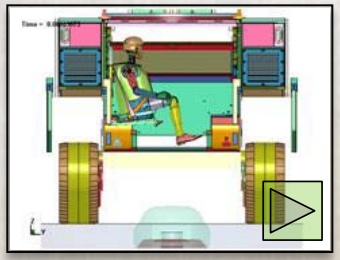
JLTV



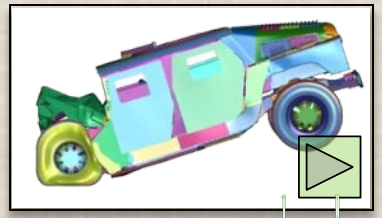
FED

MRAP

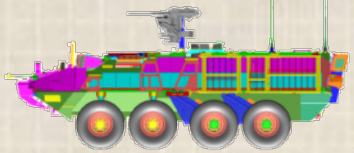
Analytics



Blast



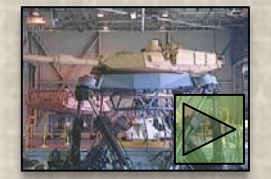
Structures / Durability



Crew Safety

Hardware & Man-In-The-Loop Simulation

MRAP



Turret Test

Characterization

Prototype & Demonstrators

TWVS

APD

FED

HPC & Data Management

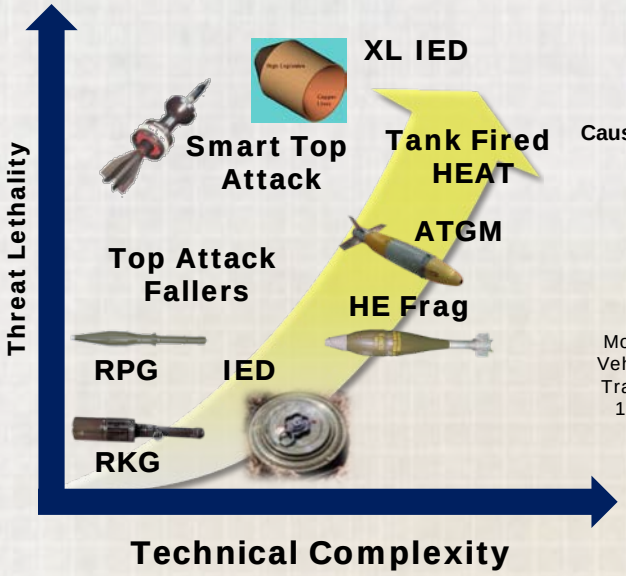
High Performance Computing (HPC)

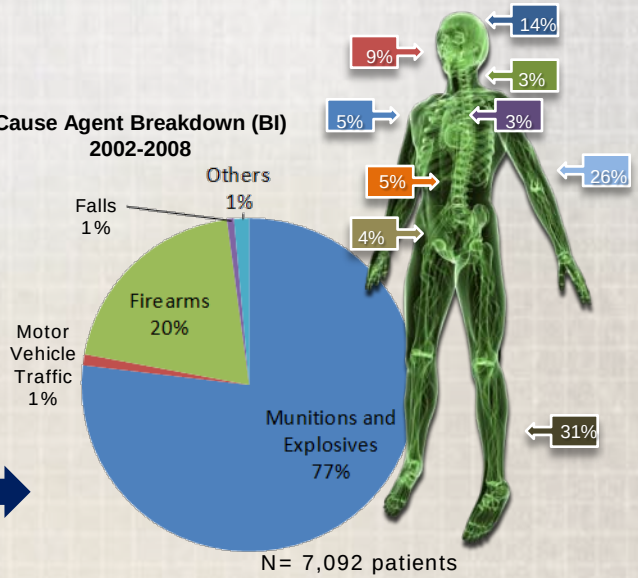
Computer Aided Virtual Environment (CAVE)

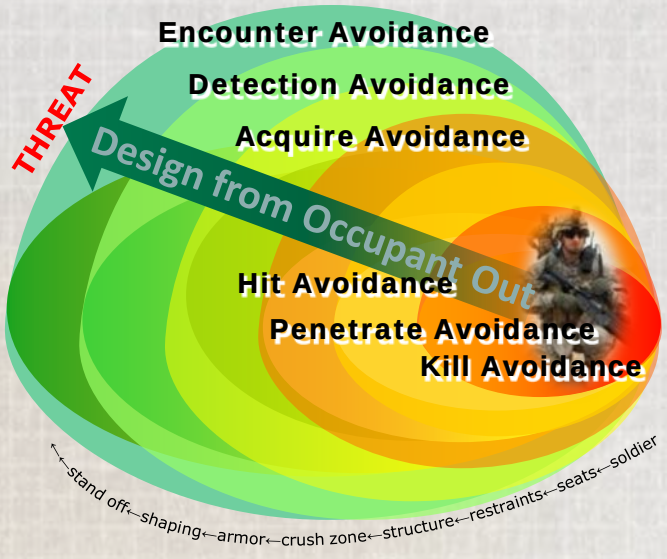
Advanced Collaborative Environment (ACE)

Providing Rapid Assessment and Integration Services throughout the Life Cycle of both Technology and System / Platform Development Programs.

Excellence in Ground Systems Survivability
Occupant Centric Vehicle Protection

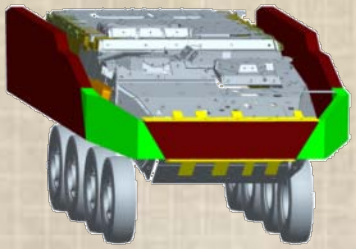






Increasing Demands and Operational Flexibility Require Strategic Investments in Key Areas

Kill Avoidance



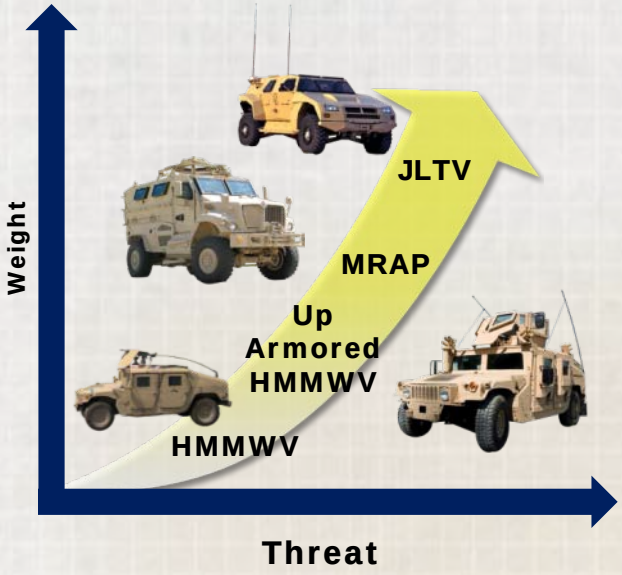
Penetration Avoidance

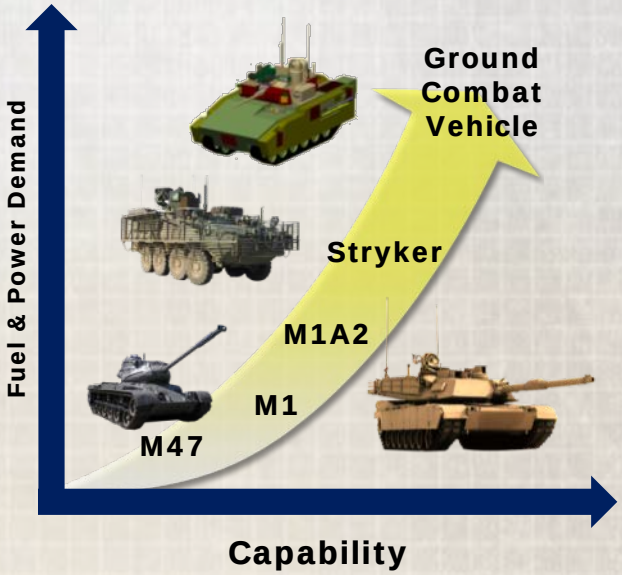
Hit Avoidance

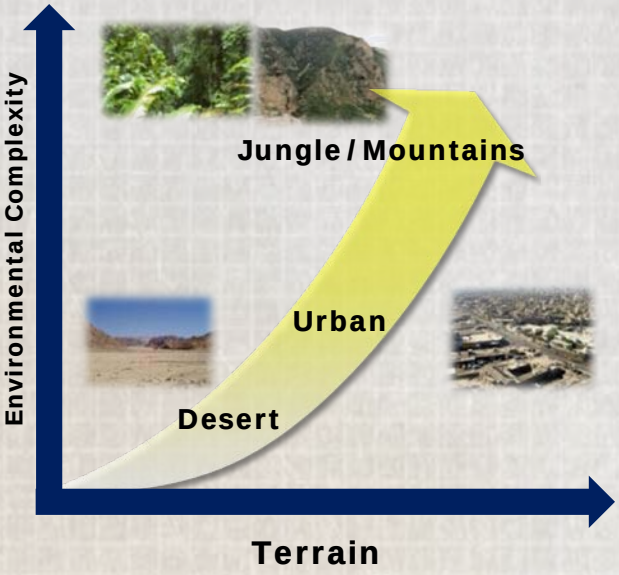
Detection Avoidance

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Excellence in Vehicle Mobility & Energy Efficiency

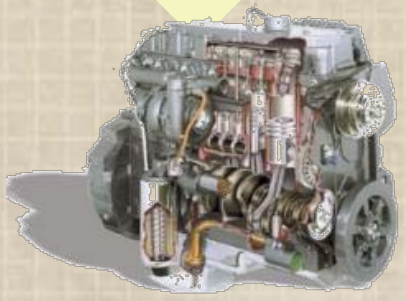




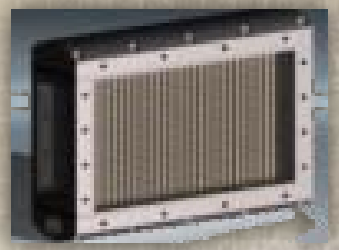


Increasing Demands and Operational Flexibility Require Strategic Investments in Key Areas

Energy Storage



Power Generation & Control

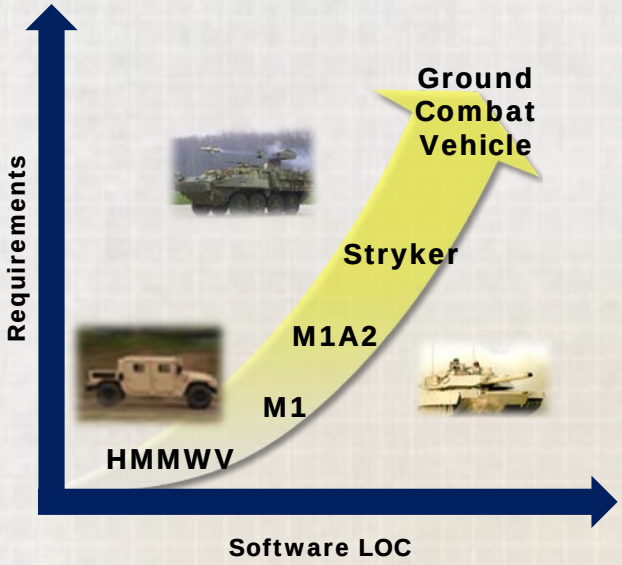


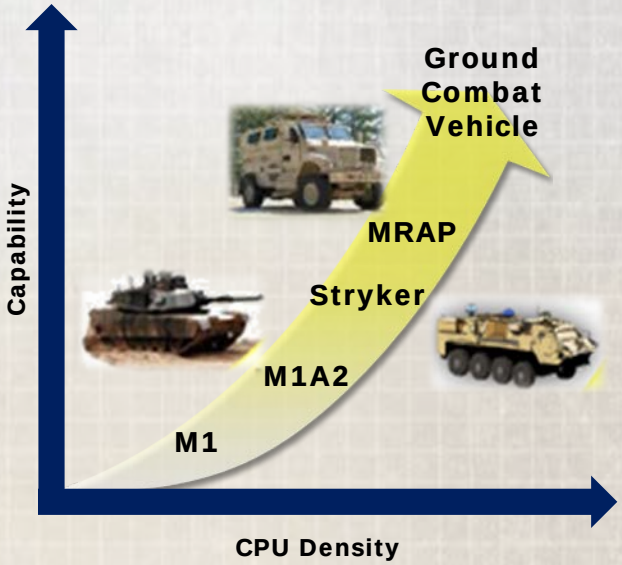
Thermal Management

Track & Suspension

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

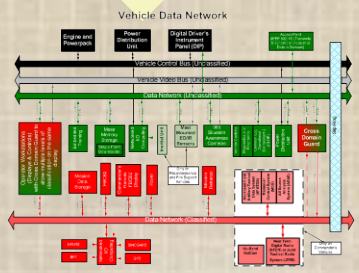
Excellence in Vehicle Electronics & Software





Increasing Demands and Operational Flexibility
Require Strategic Investments in Key Areas

Vehicle Networks



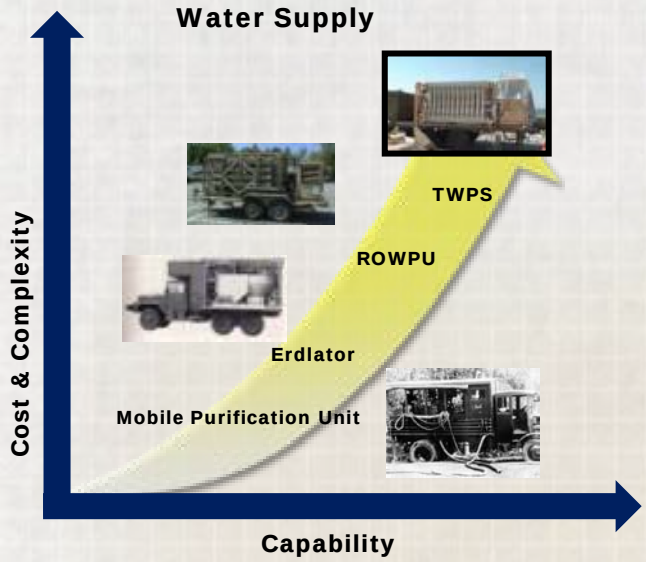
Architectures

Computers

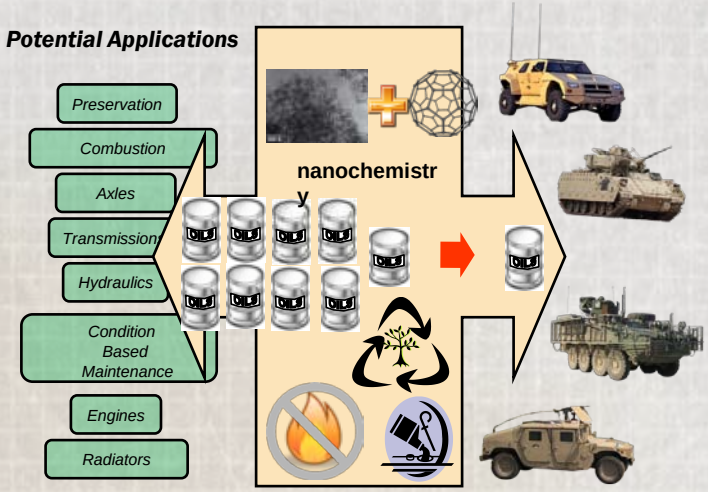
Software

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Excellence in Force Projection Technology



Labs & Facilities

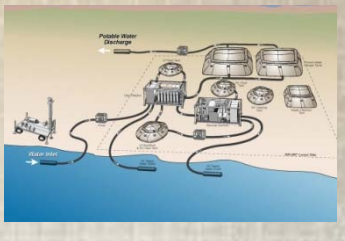


POL Technology

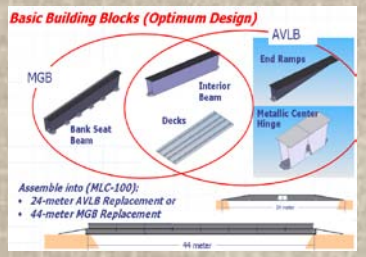
Mechanical Countermine

Petroleum Supply

Water Supply



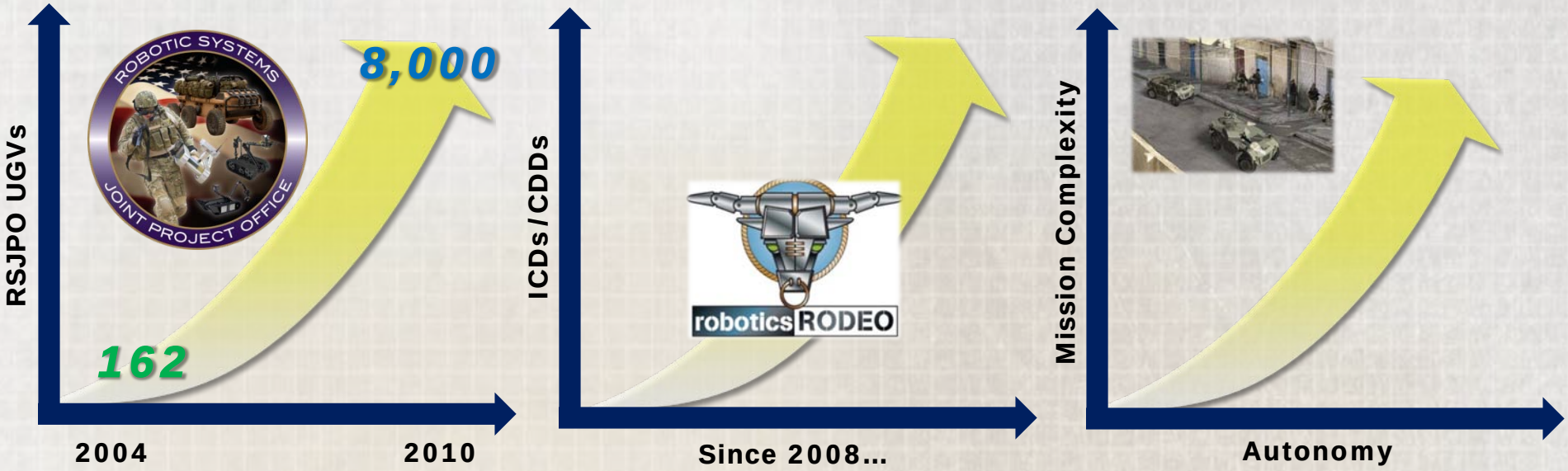
Bridging



Combat Engineering and Material Handling Equipment

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

Excellence in Robotics



Increasing Demands and Operational Flexibility
Require Strategic Investments in Key Areas

Reliable operations

Intelligent Control

Lighten the Load

Collaborative Interoperability

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

It's All About the Warfighter

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.